USGS
science for a changing world

Earthquake Shaking | Yellow Alert

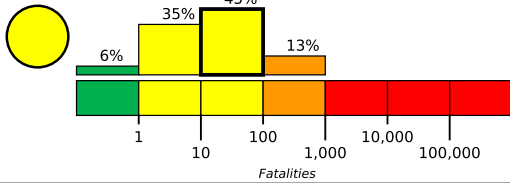GSN | USAID FROM THE AMERICAN PEOPLE

ANSS

PAGER
Version 4

M 5.5, 11 km W of San Bartolo, Peru

Origin Time: 2022-05-12 21:55:48 UTC (Thu 16:55:48 local)
Location: 12.3812° S 76.8921° W Depth: 52.1 km

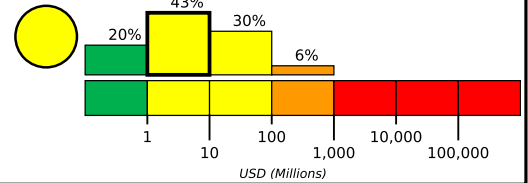Created: 2 weeks, 3 days after earthquake

Estimated Fatalities

Yellow alert for shaking-related fatalities and economic losses. Some casualties and damage are possible and the impact should be relatively localized. Past yellow alerts have required a local or regional level response.

Estimated economic losses are less than 1% of GDP of Peru.
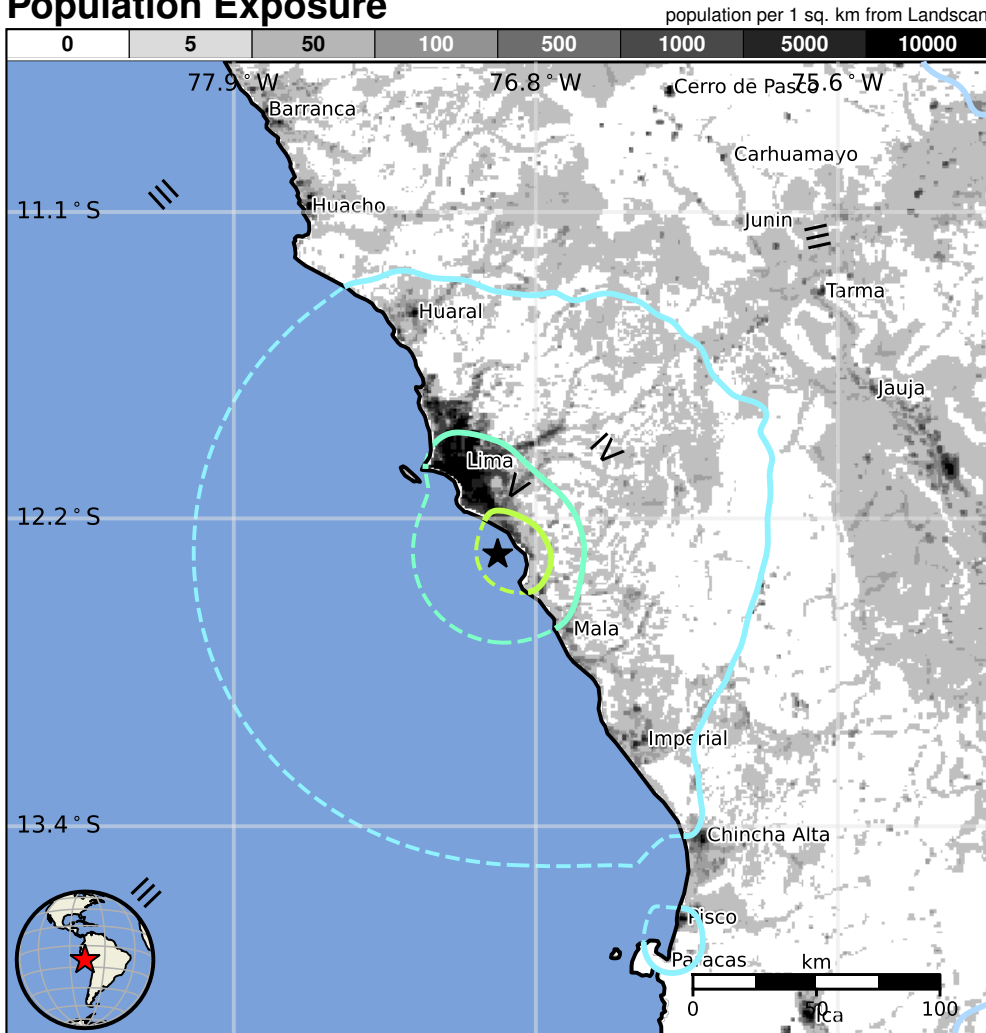
Estimated Economic Losses

USD (Millions)

Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		–*	2,321k*	2,175k	7,742k	1,690k	6k	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure

population per 1 sq. km from Landscan

0	5	50	100	500	1000	5000	10000

Structures

Overall, the population in this region resides in structures that are highly vulnerable to earthquake shaking, though some resistant structures exist. The predominant vulnerable building types are mud wall and reinforced/confined masonry construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1974-10-03	70	7.6	VIII(43k)	78
1996-11-12	320	7.7	VIII(2k)	14
2007-08-15	115	8.0	VIII(493k)	514

Recent earthquakes in this area have caused secondary hazards such as landslides that might have contributed to losses.

Selected City Exposure

from GeoNames.org

MMI	City	Population
VI	San Bartolo	6k
VI	Punta Hermosa	<1k
VI	San Luis	9k
VI	Pucusana	<1k
VI	La Molina	<1k
VI	Chilca	13k
V	**Lima**	**7,737k**
V	Callao	813k
III	Huancayo	377k
III	**Cerro de Pasco**	**79k**
III	**Ica**	**247k**

bold cities appear on map. (k = x1000)

PAGER content is automatically generated, and only considers losses due to structural damage.
Limitations of input data, shaking estimates, and loss models may add uncertainty.
https://earthquake.usgs.gov/earthquakes/eventpage/us6000hkpv#pager

Event ID: us6000hkpv